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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/036,882	01/02/2002	Russell Reed	79377	5976
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23572	7590	12/19/2003
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EXAMINER

CROSS, LATOYA I

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,882

Applicant(s)

REED ET AL.

Examiner

LaToya I. Cross

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 7 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 5, 6, 8, 9 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,024,889 to Holland et al.

Holland et al disclose a composition comprising a fuel, oxidizer and binder. The fuel is disclosed as being 5-aminotetrazole (col. 4, lines 1-4). The oxidizer is disclosed as being alkali metal nitrates or perchlorates (col. 4, lines 10-13). The binder is disclosed as a polymeric binder (col. 5, lines 43-47). The amount of fuel is disclosed as being present in an amount up to about 50% (col. 4, lines 14-15). The amount of oxidizing is disclosed as being present in an amount as little as 20% (col. 4, lines 17-20). The binder is present in an amount of up to 15% (col. 5, lines 49-51).

Holland et al differ from the instant invention in that the amounts of components (fuel, in particular) is not the same as that claimed by Applicants. Applicants claim 60-95% fuel,

Art Unit: 1743

whereas Holland et al disclose up to about 50% fuel. MPEP 2144.05 states that where the claimed ranges and prior art ranges are close enough that one skilled in the art would have expected them to have the same properties, a *prima facie* case of obviousness exists. In this instant, the amount of fuel disclosed in Holland et al is close enough to that claimed, that the skilled artisan would expect both compositions to have the same properties, absent evidence to the contrary that 60% fuel component provides unexpected results over 50% fuel component.

4. Claims 2, 10, 18, 21, 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland et al as applied to claims 1, 5, 6, 8, 9 and 13-17 above, and further in view of US patent 6,045,637 to Grzyll.

The disclosure of Holland et al is described above. Holland et al fails to teach the presence of flame inhibitor precursors.

Grzyll teaches fire suppressing gas generating compositions comprising fuel, oxidizer and binder. Additionally, Grzyll teaches flame retardant materials in the compositions. The preferred flame retardant materials or bromine containing materials, such as hexabromocyclodecane and decabromodiphenyl oxides. Grzyll teaches that these flame retardants are not only flame retardant themselves, but also their decomposition products provide flame retardancy properties. Thus, it would have been obvious, to one of ordinary skill in the art to incorporate flame inhibiting precursors into the compositions of Holland et al to impart good flame inhibiting properties to the compositions using inexpensive materials.

Art Unit: 1743

5. Claims 3, 4, 11, 12, 1, 20, 22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland et al in view of Grzyll as applied to claims 2, 10, 18, 21, 23 and 28 above, and further in view of US Patent 5,467,715 to Taylor et al.

The disclosures of Holland et al and Grzyll are described above. Neither Holland et al nor Grzyll teaches powder pressing material or electrostatic charge suppressors.

Taylor et al teach a gas generating composition similar to that instantly claimed by Applicants in that the composition of Taylor et al comprises a high nitrogen content solid and an oxidizer. Taylor et al teaches that it is frequently desirable to pelletize the gas generating composition thus requiring the use of binders and pressing aids (col. 3, lines 31-33). As binders and pressing aids, Taylor et al teach components which are conventionally used in pelletizing gas generating compositions such as graphite and mica.

Thus, because Taylor et al teach the conventional use of graphite and mica for pelletizing in gas generating compositions which also comprises high nitrogen content solids and oxidizers, it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to incorporate mica and graphite into the gas generating compositions of Holland et al with the expectation of resulting in a gas generating composition similar to that instantly claimed by Applicants.

Allowable Subject Matter

6. Claims 7 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach or suggest polyethyl acrylate in fire suppressing gas generating compositions, as claimed by Applicants.

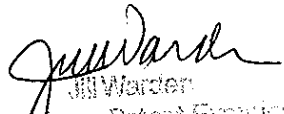
Art Unit: 1743

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 703-305-7360. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 703-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. The Examiner is scheduled to relocate on December 17, 2003. After this date, the Examiner may be reached at (571) 272-1256.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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December 15, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1156